ABSTRACT OF THE DISCLOSURE

A refractory metal core for use in a casting system has a coating for providing oxidation resistance during shell fire and protection against reaction/dissolution during casting. In a first embodiment, the coating comprises at least one oxide and a silicon containing material. In a second embodiment, the coating comprises an oxide selected from the group consisting of calcia, magnesia, alumina, zirconia, chromia, yttria, silica, hafnia, and mixtures thereof. In a third embodiment, the coating comprises a nitride selected from the group consisting of silicon nitride, sialon, titanium nitride, and mixtures thereof. Other coating embodiments are described in the disclosure.